

Ser. No. 10/659,653  
Amdt. dated October 24, 2006  
Reply to Office Action of April 25, 2006

PF020108

### Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

### Listing of the Claims

1. (Currently Amended) Dielectric resonator antenna [operating according to transverse electric (TE) mode] comprising a [single] block of dielectric resonator [material of specific permittivity  $\epsilon_r$ , said block] having a first face intended to be mounted on earth plane and covered with a first metallic layer, wherein at least one second face perpendicular to the first face is covered with a second metallic layer contacting said metallic layer covering said first face, said second metallic layer covering said second face extending over a width less than the width of the second face and over a height less than or equal to the height of the second face, and wherein said block of dielectric resonator comprises a third face being at least partially unbounded by conductive material so as to emit radiation from said third face.

2. (Previously Presented) The antenna according to Claim 1, wherein the second metallic layer covering the second face is centred with respect to the width of the said second face.

3. (Previously Presented) The antenna according to Claim 1, wherein the second metallic layer covering the second face is extended via a third metallic layer covering a third face parallel to the first face.

4. (Previously Presented) The antenna according to Claim 3, wherein the third metallic layer covering the third face stretches over a width less than the length of the third face.

5. (Previously Presented) the antenna according to claim 3, wherein the width of the third metallic layer covering the third face is different from the width of the second metallic layer covering the second face.

6. (Currently Amended) Dielectric resonator antenna [operating according to transverse electric (TE) mode] comprising a single block of dielectric material having a first

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face, a second face, and a third face [of specific permittivity  $\epsilon_r$ ] said block of dielectric material being mounted on a substrate with a face forming ground plane, the block of dielectric material having said first face [intended to be] mounted on said substrate covered with a first metallic layer and said second face perpendicular to said first face covered with a second metallic layer contacting said first metallic layer covering said first face, said second metallic layer covering said second face extending over a width less than the total width of said second face a height less than or equal to the height of said second face, said dielectric resonator being excited through a slot provided in the substrate and a microstrip line provided on a face of the substrate opposite to the face forming ground plane crossing said slot, and said third face being at least partially unbounded by conductive material so as to emit radiation from said third face.

7. (Previously Presented) The antenna according to claim 6, wherein the second metallic layer covering the second face is extended via a third metallic layer covering a third face parallel to the first face.

8. (Previously Presented) The antenna according to claim 7, wherein the third metallic layer covering the third face stretches over a width less than the length of the third face.

9. (Previously Presented) The antenna according to claim 8, wherein the width of the third metallic layer covering the third face is different from the width of the second metallic layer covering the second face.